Section – B

(Short Answers)

Note: Answer any Eight of the following questions. Each question carries 05 marks.

Q.2 What is Scientific Law?

Q.3 A compound containing C, H and O, whose molecular formula mass is 180 a.m.u and empirical formula is CH_2O. Determine its molecular formula.

Q.4 Explain the main features of Bohr's Theory.

Q.5 Write note on any ONE of the following.

Metalloids Metal

Q.6 Give the characteristics of covalent compounds.

Q.7 The pOH of a solution is 9.40. Calculate the (H^+) ion concentration.

Q.8 Differentiate between Solution and Suspension.

Q.9 What is the function of a salt bridge of porous partition in an electrochemical cell?

Q.10 What is Aqua Regia? How does it dissolve gold?

Q.11 Why alkanes are said to be saturated?

Q.12 Calculate the molecular mass of each of the following.

(i) H_2O (ii) H_2O_2 (iii) C_6H_6 (iv) CO_2 (v) C_2H_6O

Q.13 Balance the following chemical equations.

(i) $CaCO_3 + HCl \longrightarrow CaCl_2 + H_2O + CO_2$

(ii) $WO_3 + H_2 \longrightarrow W + H_2O$

(iii) $Cu_2O + C \longrightarrow Cu + CO$

(iv) $KClO_3 \longrightarrow KCl + O_2$

(v) $NH_3 + O_2 \longrightarrow NO + H_2O$

Section – C

(Descriptive Answers)

Note: Answer any TWO of the following question. Each question carries 14 (7 + 7) marks.

Q.14 (a) What do you mean by hard water? How is the hardness of water removed?

(b) Calculate the amount of silver deposited when 10 ampere of current is passed for 50 minutes through a solution of $AgNO_3$. (Z = 0.00118 g/C of Ag)

Q.15 (a) Describe the discovery of proton in detail with neat diagram also write the properties of positive rays.

(b) What are Hydrocarbons? How they are classified?

Q.16 (a) Define heat of neutralization. What would be the value of heat of neutralization when strong acid reacts with strong base?

(b) What do you understand by transition and representative elements?